MEASURING DEPTHS ALONG THE R/V R. MARGALEF TRACKS: IMPROVING THE IEO CONTRIBUTION TO EMODnet BATHYMETRY

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INTRODUCTION

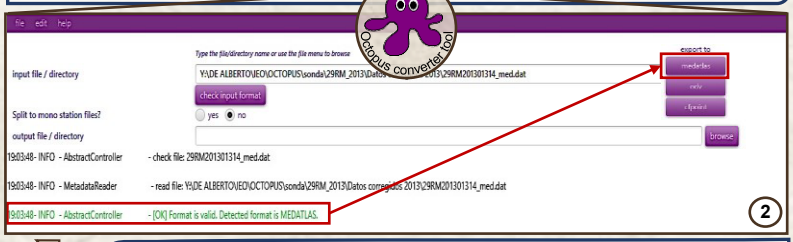
Seabed mapping techniques have improved over the last decades due to the increasing needs of high-resolution data. In the framework of oceanography surveys carried out by the R/V R. Margalef (**Fig.1**) performed by the Spanish Institute of Oceanography (IEO) since 2014.

The navigation trajectories have been recorded using a continuous single-beam echo-sounder to measure the depth along its tracks. The system integrates the bathymetry measurements and the ship GPS position. They are mainly held around Spanish territorial waters.

Fig. 1. The Research Vessel (R/V) Ramón Margalef

METHODOLOGY

Metadata were manually completed (e.g., addition of EDMO Code, local CDI or starting and ending lat/long) and SDN-MEDAR/MEDATLAS format has been checked. Octopus tool[1] helps to complete and update common vocabularies and avoid format errors. IEO Data Center archive keeps updated data and metadata in order to facilitate future access and reuse



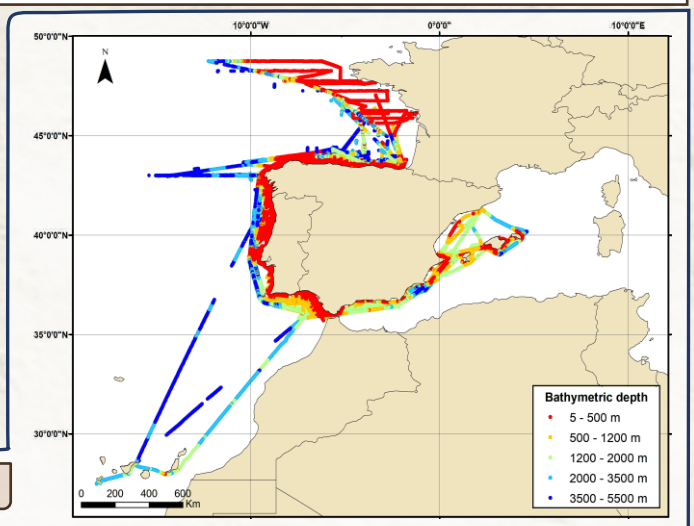
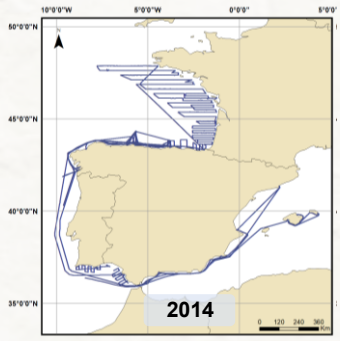


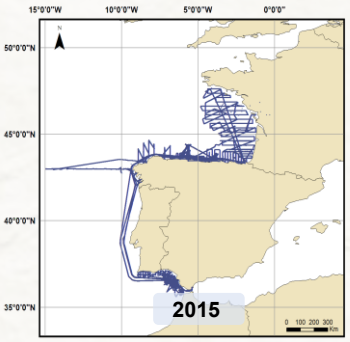
Fig. 2. Combined map showing all track points based on bathymetry

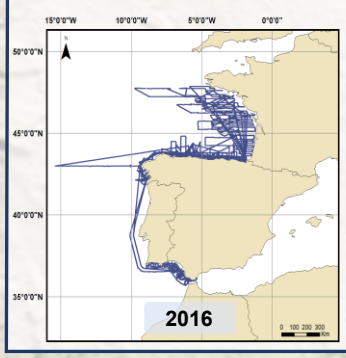
RESULTS

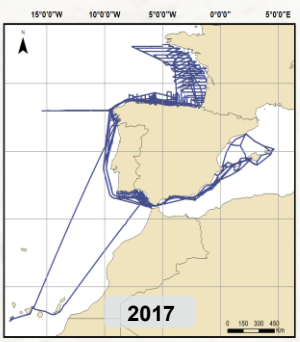
More than 3185000 record lines have been checked, contributing to the improvement of scientific knowledge of the seafloor. All these data are freely available for the scientific community in order to reusing them through the initiative EMODnet Ingestion[3] (Data Ingestion Portal) and SeaDataNet[4] infrastructure.

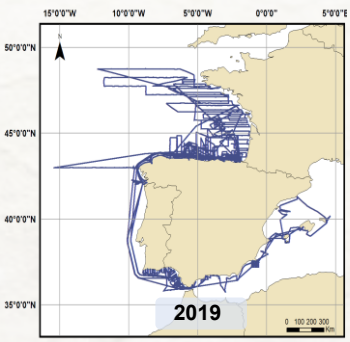
The use of single-beam echo-sounders is now combined with multi-beam ones in order to gain data accuracy. The combined results in regional Data Terrain Models (DTM) have also been integrated into EMODnet Bathymetry[2] This work adds valuable information that completes previous multi-beam surveys, thereby, improving the resolution of less sampled seafloor areas in the Spanish waters (**Fig. 2**).











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[2] https://www.emodnet-bathymetry.eu
[3] https://www.emodnet-ingestion.eu
[4] https://www.seadatanet.org